The differences of the present invention render it unobvious.

The differences in features and structure between the Applicant's system and the ones suggested in the patents cited are significant, and this novel configuration of hardware and software gives rise to new and unexpected results which could not have been anticipated by someone proficient in the art, as the results are very different from those of the other patents cited.

Ruppert et al is a 1997 patent for a "Portable RF ID Tag and Barcode Reader"; it is a descendent of a 1995 Ruppert et al patent (5,424,524) discussed in previous correspondence on this application. The Ruppert et al patents and Suzuki are all conceived as beneficial to retail stores, and assume dependency on the central computers of those stores. They are expected to be of use within specific retailers and have extremely narrow functions, which make them of far less use to an individual owning them than the present invention.

Each of these references is complete and functional in itself, so there would be no reason to make substitutions or combine them. Each offers solutions to the problems they purport to solve. Ruppert is concerned with streamlining shopping via shopping lists and the use of automated shopping tools, notably barcode readers, to gather information about items to be purchased within the shopping environment (the example most frequently offered is a grocery store). Suzuki presents a system "to collect and store customer transaction history information in real-time and make that information available to a department store or chain store POS, or other in-store terminal"; to "maintain a shopping history record of purchases by particular customers so as to award loyalty or incentive points...." And to keep this information current on a moment to moment basis as a customer roams throughout a department store making multiple purchases.

Ruppert et al and Suzuki do not contain any suggestion that they be combined, as there would be no advantage to doing so. They are both geared to interfacing with a store's check out

terminals, streamlining the checkout process, but they are conceived for different kinds of

shopping and different retailer goals. Suzuki wants to "develop promotional and personalized

greeting messages by reading and analyzing the demographic profile..." while Ruppert is aimed

at providing tools to make shopping more efficient.

Not only would there be no advantage to combining the two systems, they are mutually

incompatible, as they organize information differently. Whereas Ruppert offers permanent

storage of multiple shopping lists, the transaction history information stored in Suzuki's device is

intended to be ephemeral. Older data is overwritten by newer data (col. 4 Line 32 through col. 4

line 36).

It is well known that for any prior-art references themselves to be validly combined for use in a

prior-art § 103 rejection, *the references themselves* (or some other prior art) must suggest that

they be combined. E.g., as was stated in In re Sernaker, 217 1. U.S.P.Q. 1, 6 (C.A.F.C. 1983):

> "[P]rior art references in combination do not make an invention obvious unless
>
> something in the prior art references would suggest the advantage to be derived from
>
> combining their teachings."

As was further stated in Uniroyal Inc. v. Rudkin-Wiley Corp., 5 U.S.P.Q.2d 1434 (C.A.F.C.

1988), "Where prior-art references require selective combination by the court to render obvious a

subsequent invention, there must be some reason for the combination other than the hindsight

gleaned from the invention itself....*Something in the prior art must suggest the desirability and*

thus the obviousness of making the combination." [Emphasis supplied.]

In line with these decisions, the Board stated in Ex parte Levengood, 28 U.S.P.Q.2d 1300

(P.T.O.B.A.&I. 1993):

"In order to establish a *prima facie* case of obviousness, it is necessary for the examiner to present *evidence*, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art *would have been led* to combine the relevant teachings of the applied references *in the proposed manner* to arrive at the claimed invention. ...That which is within the capabilities of one skilled in the art is not synonymous with obviousness. ...That one can reconstruct and/or explain the theoretical mechanism of an invention by means of logic and sound scientific reasoning does not afford the basis for an obviousness conclusion unless that logic and reasoning also supplies sufficient impetus to have led one of ordinary skill in the art to combine the teachings of the references to make the claimed invention.... Our reviewing courts have often advised the Patent and Trademark Office that it can satisfy the burden of establishing a *prima facie* case of obviousness only by showing some objective teaching in either the prior art, or knowledge generally available to one of ordinary skill in the art, that 'would lead' that individual 'to combine the relevant teachings of the references.' ...Accordingly, an examiner cannot establish obviousness by locating references which describe various aspects of a patent applicant's invention without also providing evidence of the motivating force which would impel one skilled in the art to do what the patent applicant has done."

In the present case, there is no reason given in the O.A. to support the proposed combination other than the assertion that the teaching of Suzuki discloses a device with "an editable user database of previous transactional information."

A careful reading of Suzuki suggests that although the database is editable, it is not editable by the "user" at all but by the store's computer. The Abstract says "Check-out terminals record a

customer's most recent transactions in the customer's transaction history storage area...." It then says "A customer is able to maintain a transaction history without intervention of a store platform computer" – although that may sound like the customer is in charge of the information, this is not the case. The customer merely carries around "a portable, machine-readable personal memory store" (col. 4 Line 15 through col. 4 line 16). "The portable machine-readable personal memory store is used in conjunction with at least a point-of-sale check-out type terminal which includes a personal memory store interface unit capable of reading, writing and editing demographic profile, transaction history and incentive indicia information of a personal memory store." (col. 4 Line 37 through col. 4 line 42). Individual terminals edit the information (rather than the central computer having to do it) but individual humans have no access to the stored personal information.

Suzuki teaches away from the Applicant's system, in that the use and purpose of the editable user database is completely opposite. In the Applicant's system, the database is accessible to the owner to make use of and edit, and it is intended to gather information for permanent storage, where Suzuki gathers information not accessible to the user, which is stored on a transitory basis. **Suzuki also teaches away from Ruppert**, which generates shopping lists to be made use of again and again, and allows users access to the database in order to customize and otherwise interact with their shopping lists.

Since no advantage would be gained from combining the teachings of the two patents, even if they could be made compatible, Applicant requests that the Rejection of Claims Under §103, on the basis of those two patents, be withdrawn.

Applicant's invention solves a different set of problems. Both Ruppert et al and Suzuki teach uses of their combined elements to solve problems of retail establishments. As set forth in the

claims, Applicant's invention is "A system for assembling, accessing and maintaining a portable personal inventory". See In le Wright, 6 USPQ 2d 1959 (1988).

Neither reference addresses the needs of individuals to keep track of collections of items other than those related to a particular retail establishment. Both patents are for systems devoted to shopping, not collecting or cataloging collections. Suzuki's system does nothing outside of its specific retail environment. Considering that most people like to shop at many different stores, something less limited would be desirable, even if only for shopping.

Both systems depend on communication links with a store's Central Computer (or one of its remote terminals) to interact with the portable unit supplied to or owned by individual shoppers. Although Ruppert suggest embodiments wherein there is more than one retail store participating, each retailer would be required to make a major commitment of resources in order to do so. Still, only data about the items in participating establishments' databases would be accessible to the individual consumer. Ruppert's portable device can read barcodes, but "The bar codes on products do not encode the entire description of the product. They only encode a product identifier which is mapped in the store computer to an ASCII string which describes the product in the manner seen by the user on his or her receipt. When the user downloads the price list, the ASCII string for each item available in the store is downloaded with its price and its bar code ID." (col. 16 Line 23 through col. 16 line 31). Ruppert is so wedded to the basic concept of the central computer that one embodiment embeds the "portable" device in a shopping cart. Granted, this is not envisioned as an individually owned terminal, but it does not violate the spirit of the invention. Ruppert does suggest a use in real estate shopping, but again depends on contact information being supplied to access a computer belonging to a participating realtor.

Neither invention suggests use by individuals for personal home inventory management as set out in the embodiments of the Personal Inventory Management System, and neither invention would lend itself to the task. Ruppert expects "users to generate shopping lists by selecting items from prestored lists which list all possible items that a shopper may want." (col. 6 Line 17 through col. 6 line 19). The "database of all possible choices" (col. 8 Line 28 through col. 8 line 29) is not applicable to the collections of books, CDs, videos, and so forth that people will want to catalogue in their homes. This "database of all possible choices" is envisioned in terms of one retailer's merchandise. Ruppert's figure 1 illustrates a Grocery List with peanut butter, milk, eggs, bacon, and so on.

The lookup tables corresponding to the codes on CDs and books are a necessary bridge between the raw bar-code data and the complete information a collector wants to have on file. Rupert uses "fuzzy logic" to bridge a gap between a consumer's description of a desired item and the specific description in the store's computer: "the user may enter only 'peanut butter' on his or her shopping list whereas the store computer may have entered therein three entries for 'Skippy brand, chunky style peanut butter'...." (col. 16 Line 9 through col. 16 line 21). This is completely different from a system required to identify precisely whether one has a movie called "Heaven Can Wait" from 1978 or a very different movie of the same name from 1943, or for that matter, one of at least three songs called "Heaven Can Wait" (by Michael Jackson, Meat Loaf, and Iron Maiden). Lookup tables apart from the computer system of one store are necessary in order to use the device independently, either cataloguing one's own collections at home or out shopping among a multiplicity of different stores.

The combination of elements in the present application goes beyond what any combination of Ruppert and Suzuki could achieve. Applicant's invention is supplied with *data from many manufacturers*, rather than from retail establishments. No suggestion of any such use is in either

of the references. Without this feature the uses of the technology remain limited, and would not suit the purposes of Applicant's invention.

The present invention solves a long felt need: a Personal Inventory Management System is something that would be particularly welcomed by individuals who enjoy collecting items such as books, CDs and video recordings. Collectors accidentally buy multiple copies of such things because they lose track of what they actually own. Some people try to keep lists on index cards to carry with them while shopping. Some compile lists via their home computers and carry printouts with them, which need to be thrown away and re-printed as they become outdated. No satisfactory product exists to meet the needs of these people.

To give an example, a website – http://eblong.com/zarf/bookscan/ – tells in great detail how to create software to decode UPC codes. The author of the site describes how he hand-enters this data to his computer and stores it there, not having thought of a way to take it with him. Readerware (www.readerware.com) supplies software to let people upload data, use internet resources to interpret barcodes and create lists, but does not offer the ease of use of the applicant's invention.

Applicant's system includes processes devoted to determining if a person already has a given item. The Personal Inventory Management System's ability to determine whether or not an item is already entered in inventory as "owned" is a feature of great value to collectors. The Applicant's system is designed to be of value to its owner no matter where he is or which store he happens to be shopping in. All its capabilities go with it. It is independent: it is not tied to any retail store's Central Computer.

While Suzuki offers to help prevent duplicate purchases of the same item within the same store on the same day, it does not offer guarantees extending to other days or other places.

If this invention were obvious it would have been implemented by now.
There are thousands of developers trying to come up with new and unique uses for "PDAs" (Palm Pilot or Handspring type Personal Data Assistants). The "Developers" section of Palm Pilot's web site (http://www.palmsource.com/developers/) claims that there are 250,000 software developers working with their operating system.

Symbol Technology, the company that makes the barcode-reader attachment for Handspring, as well as barcode devices for many other companies, has engineering teams of its own. These engineers are employed to make Symbol Technologies' products as ubiquitous as possible. Therefore, if these engineering teams had thought of an application for barcode readers that might appeal to a great many individual consumers rather than to a limited number of large retailers, they would have put efforts into developing and patenting any such device.

In 2001, a Symbol Technologies press release announced that "Symbol Technologies has taken the personal productivity concept of the PalmPilot™ connected organizer one step further by integrating miniaturized bar code laser scanning technology into the familiar pocketable form factor for various application-specific needs of businesses". The release also stated that there are "over 10,000 registered Palm™ solutions providers".

Neither of the cited patents suggests the idea of integrating the elements that the present application calls for. One crucial added element of the Personal Inventory Management System that is beyond the teaching of either of the references is provision for multiple independent

sources of "look-up tables", these databases to be supplied by many different manufacturers and publishers.

Only by being brought together **do these elements, in a synergistic effect,** give the user a practicable way of monitoring and updating his personal inventories.

One element that the Personal Inventory Management System system *omits* is the dependence of the "Central Computer" called for in all of the referenced patents. By removing this dependence, the utility of the device is broadened significantly.

Ruppert and Suzuki both fail to teach anything resembling the uses to which a Personal Inventory Management System could be put.

An artisan incorporating the teachings of Suzuki into those of Ruppert et al would, from the standpoint of the uses the Applican'ts system serves, be a diminution of the capabilities of Ruppert. No combination leads to independent devices of use to an individual in the home.

Rather than an invention to benefit a large retail establishment, the claims for Applicant's system all specify that the units employ **"one or more data bases, to be supplied by any of a multitude of sources offering preexisting databases or from purpose-built data bases." Each embodiment in Applicant's claims offers the individual owner of the device capabilities that go far beyond the limited usefulness of a unit tied to a retailer.** Neither of the patents cited propose, for instance, the kind of portals for communication with devices other than those native to the stores to which they are tied. Neither discloses a system involving "at least one dynamic database not associated with a barcode translation database,

whereby data relating to a multitude of household inventory items, entered manually or electronically, may be stored.

It is impossible to construe either patent as including the capability for the owner of one of the mobile devices to use it to manipulate "data relating to a multitude of household inventory items". Each store is a separate entity, employing its own databases, limited to its own inventory. Ruppert's paradigm is a grocery store. If the owner of the related portable communications terminal wants to use its shopping lists to catalogue cans of soup he'll be fine, but he will not be able to catalogue his books.

One new and unexpected result of combining the elements of Applicant's system is the disappearance of major disadvantages inherent in the systems described in the cited patents.

The Personal Inventory Management System's freedom from dependence on a central computer makes it a vastly different proposition from the store-oriented shopping devices. The decision to own one rests on the end user, independent of major decisions by retail establishments. Store-oriented shopping systems depend on retailers opting to make significant investments — gambling that their customers will buy and use devices, and/or that the technology will be adopted by enough retailers to become generally accepted. Such systems are based on an unwieldy paradigm in terms of *retailer acceptance*, as each retail store is likely to wait and see if others go first. This is in addition to the problems of *consumer acceptance*.

Unlike Suzuki's which is more specific to one store, as its uses are so limited that it is not

system he picks will also be chosen by a great many other stores – all his competitors, stores he's never even heard of.   The bigger the retailer, the bigger the investment. A bet on the losing system could mean a very expensive computerized system that no one uses. How can someone risk making that judgment? It's a chicken-and-egg problem: no one wants to be last, but no one wants to go first.

From a consumer's standpoint, if someone wanted to shop at, say, three bookstores, he would first of all have to convince all of the bookstores to adopt the system, and if they weren't synchronized on the *same* system, he'd need to get an ID card or "portable device" from each one. Then he'd still only have access to those three stores' databases. If he found some books at a garage sale, he wouldn't have access to any system for looking up what he found. He wouldn't be able to keep track of a book collection, as that is **not a feature offered in retailer-based "portable" devices**.

The fact that the Personal Inventory Management System has none of the problems inherent in the other patented systems can be called an **unexpected result**, and a decidedly **superior** one.

A further, related benefit of the system, from the standpoint of its owner, is that he is in control of all of its communications and its data. Many people prefer to own gadgets that are not tied to a retail (or other) entity which is gathering information about them.

Though the problem of *consumer acceptance* of the kind of shopping systems depicted in the referenced patents has not been widely acknowledged, it has been demonstrated: The "Cue Cat" illustrates the kind of backlash that can kill a scheme for gathering information by offering consumers a barcode scanning device to help them shop. Though the Cue Cat was actually given away free of charge in Radio Shack stores, when word got out that it functioned as a data

collection device (as does the one proposed by Suzuki), people became suspicious and resentful. The other harsh reality that made the Cue Cat non-viable was that consumers found that, though it was designed to appeal to the conglomerates that wanted to interest consumers in using it, it really was of very little utility or interest, because its functions (from the consumer's standpoint) were minimal. Numerous web sites are devoted to vilification of the Cue Cat.

Another unanticipated and surprising result of combining technologies as suggested in the Personal Inventory Management System application is that of increasing the usefulness of items people already own, which neither of the cited patents does.

Many people already own PDAs. Applicant's system in an embodiment utilizing a PDA would give enhanced usefulness to products that people already own.

No combination of these systems could yield the benefits of the Applicant's system.
No combination of these patents yields a device independent from store computers. All embodiments of the devices are firmly embedded in the context of shopping, from the perspective of a retail store.

Since Applicant's Personal Inventory Management System has a wholly different goal, it uses seemingly similar technology to achieve very different results. The big difference is *where* the databases are stored, who *supplies* them, and who *controls* them.

Applicant's system is self-contained. It doesn't require a store computer to provide information pertaining to the barcodes it scans, as that information is loaded into it in specialized databases. The databases necessary to interpret the various kinds of bar codes aren't confined to those associated with a retail establishment. Its databases are provided by manufacturers, such as

publishers of books and music, who already have such databases on hand, and from various

catalogs. **These features are suggested in neither of the patents referenced.**

The applicant is grateful to the examiner for providing the above referenced patents. They

exemplify the current state of developments for portable devices that read bar codes, suggesting

evolution falling short of implementation useful to an individual on a personal basis.
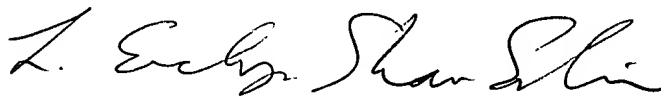
Conclusion

For all the above reasons, applicant submits that the claims are all patentable over the prior art.

Applicant respectfully solicits reconsideration and allowance.

Conditional request for Constructive Assistance

Applicant has defined novel structure which is also unobvious. If, for any reason this application

is not believed to be in full condition for allowance, applicant respectfully requests the

constructive assistance and suggestions of the Examiner pursuant to M.P.E.P §2173.02 and §

707.07 (j) in order that the undersigned can place this application in allowable condition as soon

as possible and without the need for further proceedings.

Very respectfully,

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Certificate of Mailing: I certify that on the date below this docment and referenced attachments , if any, will be deposited with the US Postal Service as first class mail in an envelope addressed to: "Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450" .

2004 July 06

L. Evelyn Shaw-Sinclair, Applicant